INTERNATIONAL FOOD AND AGRICULTURAL TECHNICAL ASSISTANCE

Improving the Transfer of Technology to Developing Countries

Prepared
for

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by

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Introduction

A study team was convened by the USDA Director of Economics, Policy Analysis, and Budget to examine options for improving the flow of U.S. food and agricultural technical assistance resources to developing countries. The team undertook a search of available literature on the subject and interviewed numerous experts to obtain their views. A draft report was circulated widely within USDA for comments, which were considered by the study team in finalizing the report.

This paper reviews technical assistance activities of the U.S. Government, discusses the present and future supply/demand scenario for U.S. technical assistance resources, identifies constraints and formulates options for improving the transfer of food and agriculture technology to the developing countries.

Little research has been published on the amount or effectiveness of technical assistance programs. Because of its recent work in studying AID-related activities, Development Alternatives, Inc. (DAI) was retained to provide a brief assessment of technical assistance efforts. The DAI report constitutes Appendix 2 of this paper. While the study team does not necessarily endorse all DAI conclusions, they do serve as an additional basis for the assessment contained in this paper.

Summary and Recommendations

The 30-year U.S. experience with international agricultural technical assistance has many times been marred by attempts to export American technology while ignoring what was appropriate to the recipient country. Americans have provided disproportionate help for the wealthier farmers to the exclusion of the poorer farmer. And, the U.S. technical aid program has not been sufficiently sensitive to each developing country's unique set of needs.

There is more demand for technical assistance by developing nations than donor countries are prepared to meet. On the other hand, the potential supply of U.S. technical resources is greater than the demand likely to be generated by bilateral and multilateral organizations over the next 5 years. Many potential technical assistance careerists are discouraged because of annual fluctuations in U.S. government resource level commitments, the widespread absence of career development benefits, and the high cost of overseas living.

Some major difficulties presently constraining effective U.S. agricultural technical assistance are: Uncertainty in the level of U.S. financial commitment; USDA's presently limited role as solely a residual manpower resource to AID; a cumbersome AID bureaucracy which prevents rapid and flexible response; fragmentation of development activities; and personnel ceiling restrictions.

The study team concluded that there is already a reasonably efficient system in operation for utilization of private sector resources. It could, no doubt, be improved upon through more effective organization and reduced bureaucracy in Washington. However, unstable demand will continue to be an inherent impediment to substantially greater utilization of private sector resources than is presently the case.

Numerous realistic options are presented, ranging from strengthening the existing arrangement to establishment of a nonprofit corporation for the conduct of U.S. bilateral agricultural assistance. The options are not mutually exclusive.

Option 1 is recommended in its entirety. USDA's contribution would be strengthened through consolidation of the specified development functions and Department-wide coordination responsibility in one agency, preferably within the international area of USDA. The effectiveness of this action would be greatly enhanced through the strong support of the Secretary for the Department's international development work. That support would also facilitate the type of greater USDA involvement with the academic community described in Option 2, primarily focussed on research.

The study team supports the testing of the farmer-to-farmer program, but feels that the program will contribute more to cultural exchange than economic development. The team feels that an AID-type organization is necessary and would not recommend transfer of total agriculture responsibility to USDA. The team, however, recommends that a broader role for USDA be negotiated for project planning and implementation. The team also feels that the options regarding establishment of a quasi-governmental corporation have merit. However, before any recommendation is made, they need to be studied and developed in substantially greater detail.

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Technical Assistance Experience

The United States has been providing agricultural technical assistance through numerous organizations and at varying levels for the past 30 years. The U.S. Agency for International Development (AID) and its predecessor agencies have been the primary channel for U.S. agricultural assistance. USDA and the Peace Corps have played an increasingly important role in recent years. Universities have also been major contributors. The private sector--business enterprises and nonprofit organizations--has played an important role in international development efforts. Multilateral agencies and international agriculture research institutions have taken on a large responsibility in international development activities. Comments on these organization types in Appendix 1 supplement the discussion below.

AID

The agriculture portion of AID's total development assistance budget has gradually increased; slightly more than 50 percent is now oriented toward agriculture. AID has also come to rely more heavily on other government agencies, universities, and private contractors for its technical resources. AID has reduced its in-house agricultural expertise and has moved toward centralization of staff at headquarters level. Roughly 2/3 of all AID personnel are in Washington.

Recent program stress has been toward land reform; local institution building; planning and policy analysis; and research, education, and extension. Reduced emphasis has been given to capital intensive and infrastructure programs. AID now emphasizes programs for the poorest of the poor countries; such programs focus on food and nutrition, small farmer, income distribution, and labor intensity problems. These types of programs have gradually supplanted capital intensive projects.

USDA

USDA's involvement is largely subject to AID requests for support. There has been no overall increase or decrease in USDA-AID activity in the past 10 years. But, there has been a shift away from Asia to Latin America and Africa; there has also been a trend from long-term resident assignments to shorter term consultancies.

AID has requested skills ranging from the highly specialized (agronomic research, soil and water management, plant protection, and pest control) to more generalized expertise in sector planning and development management.

Six USDA agencies (ARS, ERS, ES, FS, SRS, and SCS) account for 92 percent of all USDA personnel who have served overseas under AID auspices. ARS has collaborated directly with the international research institutes. FS has provided scientists to work alongside agriculturalists in many disciplines.

Peace Corps

The Peace Corps has gone full-circle in its recruitment approach. Initial stress was placed on generalists, shifted briefly to a concern

for more specialized backgrounds, and more recently is returning to a preference for generalists. A recent Peace Corps survey indicated a strong demand for technical assistance at the farm level.

Department of Interior

USDI cooperation with AID annually involves nearly 100 man-years of technical assistance in water and resource development and management. USDA and land-grant universities are involved in many of these USDI-AID activities.

Other Government Agencies

Treasury, Commerce, and the Overseas Private Investment Corporation have limited agricultural activities. Treasury's participation, however, increased significantly with the recent creation of the Joint Economic Cooperation and Development Commission.

Universities

University involvement in agricultural technical assistance has continued at a significant level over the past decade. Early activity stressed institution building in developing countries with mixed results. In recent years, greater stress has been placed on research and information transfer. Most recently, institution building has been given renewed emphasis. Title XII of the Foreign Assistance Act of 1975 offers greater involvement of U.S. universities on a longer term basis in AID's development assistance activities. At present, arrangements under this mandate are just becoming operational.

Private Sector

Nonprofit organizations have received much more AID funding than private firms or individuals. Private firms and individuals, however, represent the greater volume of contract activities.

While conclusive data are not readily available, private sector involvement appears to have increased over the past decade. This is evident in the existence of major firms with development-related components, as well as in the proliferation of consulting firms and nonprofit organizations dedicated to agricultural development activities.

The emphasis of private and voluntary organizations has shifted from disaster relief and rehabilitation to development assistance. A lack of profit incentive and fluctuating U.S. Government demand for services makes it difficult for the private sector to maintain a pool of development resources.

Multilateral Agencies

Multilateral agencies represent a major component of the total technical resources operating in agricultural development. Whereas the total dollar commitment for agriculture increased in 1975, the proportion for technical assistance decreased (Table 1).

International Agricultural Research Institutions

Financial contributions to the international research institutes have more than doubled in recent years. They have become an increasingly critical institution for collaborative research and transfer of innovative technical knowledge. The international institutes serve as a vehicle for cross-fertilization of technical resources among USDA, the universities, institute personnel, and developing country scientists. There are now nine such research centers. 1/

Farmer-to-Farmer

This program draws leading American farmers into technical exchanges with farmers in developing countries. The program, authorized since 1965, has been dormant until recently; the concept is now being tested. American farmers will be recruited and assigned through the university development contract system.

Assessment of Achievements and Benefits of Technical Assistance

The level of agricultural production, particularly of food grains, in developing countries is much greater today than would have been the case without U.S. technical assistance. Through improved seeds and cultural practices, some formerly food-deficit countries now provide enough for their own population, and, in some cases, are moving to a surplus position.

Several nations are now turning their attention to long-range economic planning. Such countries have achieved the status of "aid-graduate" nations. Turkey, Venezuela, and Brazil were big recipients of technical inputs, but now require only the more complex and refined types of help. For this kind of assistance, the U.S. Government is fully reimbursed.

Throughout the developing nations, there is visible evidence of the technical assistance given to livestock and poultry industries. Purebred herds were introduced, improving dairy production. Higher dairy and poultry outputs have improved human nutrition. Technical assistance has helped introduce new and improved forage crops to support the livestock industry. There has also been a move to reduce the small farmer's reliance on animals for power.

In the early 1950's and 1960's, substantial emphasis was placed on the infrastructure of developing nations. Rural roads, schools, health and sanitation facilities, and electrification systems were improved in order to derive benefits from a more efficient agriculture.

1/ Excellent discussions of the institutes appear in: Martin Kriesberg, International Organizations and Agricultural Development. FAER 131, Econ. Res. Serv., U.S. Dept. Agr., May 1977, pp. 76-86; Dana G. Dalrymple, Measuring the Green Revolution: The Impact of Research on Wheat and Rice Production. FAER 106, Econ. Res. Serv., U.S. Dept. Agr., July 1975.

Developing nations also sought to improve marketing, storage, and distribution facilities. Some developing nations, having reached satisfactory production and distribution levels, now look to the development of export markets to generate foreign exchange.

U.S. trained foreign nationals are making a development impact in their countries. Many ministries of agriculture are partially staffed with individuals with formal U.S. college training. Too, universities and USDA staff members have contributed greatly to institution building in the developing countries, many of them working side-by-side with the staffs of many ministries of agriculture and planning.

Technical assistance has not been void of failures and disappointments. Critics can cite projects and programs that have failed to achieve their expected missions. Others fault the whole concept of technical assistance. However, the overall thrust of technical assistance is generally accepted to have been in the right direction.

Based in part on the DAI report as well as on other research and conversations, the following concerns need to be highlighted:

(1) U.S. agricultural technology is often inappropriate for developing nations. The relative importance of the factors of production are greatly different among small farmers, and the constraints to change are great, and often not too obvious;

(2) Limited cash availability and high risk aversion among small farmers require that inexpensive technological packages be made available for small farmers;

(3) The first and easiest gains in improving the equity position of small farmers can be made by bringing the least productive farmers to the level of the more productive ones;

(4) New approaches to the extension of research and other technologies must be developed and implemented if small farmers are to become viable adopters;

(5) Each developing country presents a different set of variables which require special technological packages. There can be no canned approach to the transfer of technology; and

(6) The organizational approach for development assistance must be flexible enough to address the special needs of each country. And the approach must be innovative enough to mobilize the best technical resources available throughout the U.S. public and private sectors.

Demand for Technical Assistance Resources

The demand for technical assistance is reflected by slight increases in dollars for such aid through bilateral and multilateral

funding (Table 1). Yet technical assistance's share of total funding has slightly declined.

Table 1--Commitments to Agricultural Development Assistance

Type of Aid	1973	1974	1975	1980
		Million U.S. dollars		
Bilateral:				
DAC countries 1/	968.8	1,607.1	1,646.2	2,057.8
OPEC countries 2/	36.4	313.5	830.3	1,037.9
Total	1,005.2	1,920.6	2,476.5	3,095.7
Multilateral:	1,618.5	2,542.0	3,299.7	4,124.7
Grand Total	2,623.7	4,462.6	5,776.2	7,220.4
Technical Assistance portion of grand total	318.2	478.5	535.5	772.0
Technical Assistance as percent of total	14.5	10.7	9.3	10.0

1/ Development Assistance Committee Countries
2/ Organization of Petroleum Exporting Countries

Relatively slight increases have occurred in bilateral funding among the Development Assistance Committee countries (DAC). In contrast, a sharp increase in monetary allocations has come from ~~Oil~~ Petroleum Exporting Countries (OPEC).

Looking ahead to 1980, development assistance commitments for agriculture may reach or perhaps exceed $7 billion, of which about 10 percent can be expected to go to technical assistance. Based on these projections, the world demand for technical assistance for personnel will remain practically unchanged. Assuming the cost of supporting and maintaining an individual on a foreign assignment is $70,000 annually, there may be about 10,000 to 11,000 skilled man-years needed in 1980.

Secretary Vance recently announced that the Administration will seek a substantial increase in U.S. bilateral and multilateral aid programs over the next 5 years. AID has projected an FY 1978 budget for agriculture of $589 million. This amount is somewhat above that prevailing for 1977, but less than the funding allocation for FY's 1975 and 1976. Secretary Bergland, at the World Food Council session in Manila, said: The United States. . . will be stepping up its programs of technical assistance. Already a large complement of U.S. professionals are on the scene in developing nations, assisting in local programs. We will expand this effort and also increase the availability of trained professionals to international organization involved in similar programs."

Agriculture has long been an important component of the AID technical assistance programs. But, only since FY 1975 has the agriculture component assumed a dominant position in AID's total development assistance budget. A breakdown of AID's proposed budget for FY 1978 reflects substantial shifts from earlier years (see Appendix 1, Table 2). For example, the budget reflects a movement toward more people-type intensive programs, and a lesser emphasis on the funding of capital projects, such as roads or electrical and sanitary systems. In FY 1975, $53 million was allocated for research, extension, and education, compared to over $131 million in the proposed budget of FY 1978. Looking at the capital projects for the same years, $303 million was allocated to marketing, input supply, rural industry, and credit in FY 1975, but budgets for these types of projects will be dropping to less than half that amount in 1978. Funds available for pure technical assistance work in the AID budget for FY 1978 could reach $225 million. With such funding, the need for technical experts will likely range from about 2,800 to 3,500 man-years.

The character of technical assistance requests has changed sharply over the past few years as developing nations have matured at varying rates. Many now require a more refined type of technical requests. In earlier years, emphasis was placed on technicians primarily knowledgeable in production, storage, input supply, and credit. Such assistance helped move the elementary production, marketing, and input systems to a higher level of proficiency. As countries mature, requests for technical assistance reflect demand for experts knowledgeable in planning and policy analysis. USDA specialists work in several nations side-by-side with counterparts in doing long-range planning and policy analysis. It is contemplated that the future demand for technical assistance will continue to reflect the fact that as countries mature their requirements become more refined and complex.

Future demand for technical assistance is likely to be much higher than donor countries are prepared to meet. Also, the demand is for the entire spectrum of food and agricultural skills; but the requirements vary significantly depending on the level of development of the particular country in question. The primary constraint on meeting the demand may be the political strings which donors might wish to attach to the aid. Recipient countries may consider such strings to be an unacceptable price to pay for the assistance.

Supply of Technical Assistance Resources

The U.S. Government may not be able to meet commitments for technical assistance in developing nations because of the lack of availability of qualified technicians. The shortage of specialists for overseas assignments comes about in part because of the lack of career development opportunities and other impediments such as changing tax regulations. For example, there are many USDA employees who are highly

qualified in various subjects and would perform effectively in overseas assignments. However, most of them are not available for assignments because of: (1) Lack of incentives; (2) higher priorities based on domestic activities; and (3) uncertainty as to the possibility for a long-term career in international work.

As a result of the increasing demand for technicians and the limited supply available, USDA and other agencies are contracting for their international activities with technicians outside the Federal establishment. This shift is desirable from the standpoint of involving more individuals in the private sector.

USDA has undertaken programs designed to acquaint its employees with the possibilities for foreign assignment. Also, it has attempted to ease the problems of re-entry from foreign service. To assure a continuous supply of interested agricultural specialists, USDA must support the whole thrust of international development. It must recognize career development in international activities and develop a program of incentives to encourage highly qualified specialists to seek technical assistance assignment.

In each of the past 10 years, 300 or more USDA professionals have engaged in technical assistance work abroad. From 1970 to date, almost 2,800 USDA employees have served abroad. The current supply of USDA personnel that could be made available depends largely upon the importance attached to the international activities by the administration and appropriate encouragement from the top USDA policy staff.

The Supply Outside USDA

A large supply of agricultural specialists are employed in U.S. land-grant institutions and other universities. Such institutions, like USDA, have been engaged in technical assistance work abroad for many years.

There are now about 27,000 professional agricultural workers in the U.S. universities and the land-grant institutions of this country. Of this total number, there is no exact measure of the number that are available to engage in overseas work. A conservative estimate would place the number at about 2,500 specialists.

In many of the larger land-grant schools, there are international centers through which contracts and grants for work abroad are directed. The supply of scientists available in these institutions varies from time to time depending upon the varying Federal Commitment to Foreign assistance.

In recent years, many universities and land-grant institutions have joined together in consortia for the conduct of international agricultural development work. This is an attempt on their part to jointly provide the resources necessary to carry out large-scale projects which

AID awards from time to time. The consortia idea appears successful in pulling together qualified scientists to carry out the more difficult tasks that a single institution would be unable to handle.

The outlook for increasing the supply of available scientists in the universities and land-grant institutions is good. The optimistic outlook is based on Title XII legislation which will provide sums of money to certain institutions to build their staff capability for long-term development work. However, the institution-building thrust will require from 3 to 5 years to show visible results.

The AID Supply

AID has a rather large headquarters staff in Washington. It also has field missions in the developing countries. Unfortunately, many of the staff involved in agriculture are management types and lack formal training and experience in agriculture. Moreover, in recent years there has been a decided reduction in the number of employees in AID who are qualified agriculturists. There are only 82 professional agricultural employees in AID, a drop from almost 400 in June 1968. 1/

Many trained agriculturists may be reluctant to join AID because of its apparent emphasis on the operational and program aspects of development, as contrasted to the professional aspects of agriculture. Another constraint that AID faces in hiring agricultural scientists is that it has had, for some time, the image of being a temporary organization.

The Peace Corps Supply

The Peace Corps has been a good source of supply of technicians for organizations engaged in agricultural development pursuits. This occurs as the Peace Corps volunteer completes his assignment, returns to college to further his education in agricultural sciences, and then comes to the job market. Peace Corps alumni have proven to be, for the most part, excellent employees as they usually have a working ability in a second language and easy adaptability to foreign cultures. USDA is currently looking at the Peace Corps alumni rosters for individuals who have served in the Sahel. In 1976, 1,560 Peace Corps volunteers were engaged in some kind of agricultural work. They made up a fourth of the active volunteers. This source of supply is highly prized and has special importance for obtaining recruits for assignments in those countries where living conditions are unusually harsh.

1/ Joe Motheral and Donald Davis, "The Role of Agriculture in the Economic Development in Africa with Emphasis on Technical Manpower requirements." AID Report, 1977.

Private Sector Supply

Qualified, trained agriculturalists in the private sector may number 18,700, many of which would be less than full-time. Individuals and proprietary firms are an important source of supply. AID is required by law to first ascertain the availability of resources available within the private sector before going to other sources.

Private contractors do not assure continuous employment. An individual in a second career can usually afford the luxury of being employed sporadically. This makes the private contractor employment outlet especially attractive to retired persons. Individual farmers, to the extent that they can be attracted away from the enterprise for short periods of time, may also be available in significant numbers.

Total Supply

There are about 96,000 active agricultural specialists in the U.S. labor force (Table 2). About 10,000 of them would likely be available for overseas technical assistance assignments given sufficient incentive.

Table 2--Active agriculturists in U.S. labor force

Source	Number of Agriculturists
	Number
Federal Government - Primarily USDA and USDI 1/	48,000
Military 2/	100
Other government entities 2/	200
Educational institutions and State and local government 3/	27,000
Private sector 2/	18,000
Nonprofit organizations (including nonprofit foundations and research institutions) 2/	1,000
Unclassified 2/	1,800
Total	96,100

1/ USDA estimate.
2/ National Science Foundation, "U.S. Scientists and Engineers in 1974."
3/ Figure derived from USDA, "Professional Workers in State Agricultural Experiment Stations and Other Cooperating State Institutions, 1976-77."

The future outlook for the supply of agricultural scientists available for technical assistance work is good. This is primarily because of the impact that Title XII legislation will have in developing staffs in the land-grant institutions and universities.

Problems and Constraints in Carrying Out Technical Assistance

There are a number of roadblocks to effective technical agricultural aid programs to developing countries. This section outlines some of the more serious ones.

Lack of USDA Authority

USDA has no direct legislative authority to carry out technical assistance and training. This places USDA in a position of just responding to aid requests, without being able to display initiative, imagination, and creativity in conducting technical assistance and training projects. USDA expertise available is, thus, not fully utilized for project conceptualizations and design.

Little Employee Incentive

USDA's passive role generates little support and enthusiasm for international development activities among its employees. There is little incentive for employees to plan and build a career in international development. Rewards and recognition for work done in overseas resident assignments are not equal to those given to comparable workers in domestic programs. USDA's ability to furnish the most qualified individuals for foreign assignments is crippled by these constraints.

Variable Demand

Demand for technical aid personnel varies from year to year, mitigating USDA's ability to maintain appropriate staffing levels. Examples of this are the peak demand periods for Vietnam and later India, and the troughs which followed each. This instability in funding makes it extremely difficult to maintain a high-quality professional staff which can look forward to careers in international activities.

Fragmented USDA Effort

Technical assistance and training programs are fragmented and inadequately coordinated within the Department. In spite of the interrelatedness of several USDA international efforts, programs are often developed and conducted independently by agencies responding to several

different assistant secretaries. Examples are tropical research and Section 406 work in ARS and FAO involvement in FAS. Such fragmentation should be eliminated to minimize confusion, duplication of effort, and inefficiency.

Poor Coordination Among Organizations

Within the same country, international organizations, other donor countries, and private foundations may be involved in technical assistance work similar or related to USDA-AID projects. Sometimes, there is not a close working relationship or knowledge of work that each organization is doing. Organizations carrying out technical assistance within a country should relate to one another through a cooperative mechanism. This could eliminate duplication of effort and maximize technical resources.

Bureaucracy

Starting with AID missions in the host country and on through the Washington AID office, a cumbersome bureaucracy stifles the U.S. technical assistance effort. The first tool of this bureaucracy is the Project Identification Document. This paper identifies the scope of the problem and other relevant information preparatory to developing another document called the Project Paper. The next step is to formulate a Project Agreement. This is an agreement between the appropriate ministry and the host country and the AID mission. Once this has been finalized, the next step is the development of a Project Implementation Order/Technical (PIO/T). This is followed by the development of a Participating Agency Service Agreement (PASA) which gives USDA or other Federal agency the authority to move ahead with recruitment. Paperwork involved is substantial and the time consumed by professional staffs is large, making the initial cost of the project high before the actual work even starts. As many as 4 years may elapse between conceptualization and implementation. Two years lead time is average.

Insensitivity to Other Cultures

Individuals with appropriate skills who are also flexible enough to adapt to other cultures are all too rare. Many attempts are made to weed out individuals insensitive to the people and problems of a country prior to making a long-term assignment. An individual is often given a short-term assignment in the country in which he will be located. This procedure acquaints the potential resident assignee with the culture of the country and other conditions to which he must adjust. He and his family are also given intensive orientation on the culture and socio-economics of that nation.

USDA Recruiting Mechanism

The recruiting constraint withing USDA prevails whether the individual is from the private sector or already an employee of the Department. There is much red tape and delay through the advertising and selection processes for an overseas position. The filling of overseas positions is also hampered by the time required for medical and security clearances. Between 3 and 4 months is required to obtain the necessary security clearances for individuals in overseas positions. Such time periods often conflict with urgent work schedules. To overcome this, the employee is often given a temporary duty assignment for which security clearances are less strict.

Personnel Ceilings

No administrator will give up position slots for overseas positions if by doing so he damages his domestic programs. Consequently, personnel ceilings on international assignments should be removed from domestic program ceilings when computing an agency's quota.

Funding

The demand for technical assistance worldwide exceeds the level of funds which have historically been made available for that purpose. The U.S. contribution has declined significantly in real dollar terms, largely due to inflation.

Options for Strengthening USDA Technical Assistance

The study considered a wide range of possible options for improving the management of technical assistance activities. The following options were felt to be the most reasonable and promising.

Option 1: Strengthen the Existing Arrangement

Description: Assuming the status quo is maintained in USDA's legislative authority and reimbursable funding agreements with AID, restructuring of the administrative mechanism should be undertaken to strengthen and effectively coordinate these activities. The restructuring would include:

--Explicit assignment of responsibilities for administration and coordination of all international development activities to a single assistant secretary.

--Formulation of a single agency asigned to administer: (1) current or expanded programs concerned with training and technical assistance; (2) all current and newly-created programs under amended P.L. 480

Advantages

Under the current arrangement, the Department has been able to effectively provide hundreds of experts to AID on short- and long- term assignments. With relatively minor disruption to on-going domestic activities, the contribution of these individuals is generally considered to have been worthwhile.

The Department has, as indicated in an earlier section, extensive resources in a wide variety of agricultural technical fields. The present interagency delineation of responsibilities provides a satisfactory vehicle drawing upon those resources.

Disadvantages

This option does not go far enough in resolving the problems of making full use of USDA's resources. USDA would still be dependent on AID for funding, and constrained in its participation in the formulation of developmental programs.

Option 2: Increase USDA's International Role Through Title XII

Description: Provisions of Title XII of the Foreign Assistance Act of 1975 offer opportunities for expanded USDA participation in international development programs in accord with its customary patterns of cooperation with the land-grant universities. Under this option, expanded USDA/university cooperative activities would be carried out and USDA's mandate to operate in this area strengthened.

Background: In July 1977, the Board for International Food and Agricultural Development (BIFAD), instituted under Title XII, approved USDA's full participation in the Title XII program on an equal footing with universities with three limitations:

(1) Full membership in the BIFAD;

(2) The right to receive grants to build up USDA's capability to participate in institution-building programs; and

(3) The right to receive grants to strengthen USDA's capability to work with international research centers.

USDA can now propose research or development projects to BIFAD to be conducted by itself or in cooperation with other agencies. Or, it can join with universities in proposing or carrying out projects, as a member of a consortium or group. USDA can participate in collaborative research by meeting the same tests of contribution as are required of other intitutions, but cannot receive a grant of funds to conduct such activities.

USDA could promptly assemble for BIFAD an inventory of its prime interests and special skills in the same manner as has been done by the universities so that this information will be at hand when the Board seeks to match up problems and resources. It could also encourage its representatives on the Joint Committee on Agricultural Development (JCAD) and Joint Committee on Research (JCR) to keep their fellow members on the committees fully informed of USDA's resources, primary interests, and cooperative intentions.

The Department still is dependent upon a delegation of authority from AID. Passage of Section 1327 in H.R. 7171 would serve to give USDA a clear charter to be active in planning and conducting development-related work.

Advantages: This option would improve the flow of technical resources from the academic community, largely in the research category, and facilitate the combination of the best government-university resources for assisting developing countries.

As a federal agency, USDA can be selected to do a project under Title XII without concern about competitive bidding and other safeguards against conflict of interest. This is an advantage to BIFAD. This advantage might be especially useful in the design phase of projects, where universities fear that participation might hamper subsequent eligibility.

Much of the international work of USDA is already planned and conducted according to Title XII philosophy. In 1974, the National Association of State Universities and Land-Grant Colleges (NASULGC) and USDA established the Interntional Science and Education Council (ISEC) in recognition of the importance of joint involvement.

Under the ISEC structure, a NASULGC representative is posted with USDA where he conveys information about the interests and resources of the unversities, and sees that the university side is kept informed of USDA thinking. By participating in project identification and planning, he contributes to the more effective utilization of university resources. Similarly, USDA's ISEC staff member has opportunities to maintain contacts with the university community.

To further systematize relationships, ERS' Foreign Development Division, on behalf of USDA, has negotiated memos of agreement with Midwest Universities Consortium for International Activities, Inc. (MUCIA) and the Consortium for International Development (CID) and plans to do the same with other consortia. These agreements, indicating a desire to cooperate in international work, outline the general basis for cooperation.

Disadvantages: This option, by itself, is limited in its contribution toward the objective of better utilizing private sector resources. University contribution to development is strongest in research and teaching whereas USDA's expertise covers a far broader range of disciplines.

Option 3: Transfer of Technology Through a Modified and Enlarged Farmer-to-Farmer-Program

Description: Under this option, an enlarged and modified program of farmer-to-farmer assistance could be developed, especially in crop and livestock production. Such a program could complement the total technical assistance thrust in selected countries. The program would be focused primarily on transfer of intermediate technology to the poorest of the poor farmers through U.S. farmers on short-term assignments.

A consortia of the recognized U.S. farm organizations would be requested to take responsibility for making the farmer-to-farmer program a viable institution for improving the technology delivery system. The program could be developed with farmers under contract for a specific period of time, avoiding a build-up of a large, permanent staff. Through the consortia of farm organizations, policies could be established free of contraints of past experiences and government bureaucracy. Such a consortia of farm organizations operating with a board of directors with one member from each organization, would form the policy and decision making body. A board of directors would be accountable to the Secretary of Agriculture and be charged with the:

--implementation, direction, and supervision of a farmer-to-farmer program,

--establishment of an accounting procedure for funds, personnel, and achievements on a regularly established reporting schedule satisfactory to the Secretary of Agriculture,

--clearing of any policy decisions or other acts which might have an impact on trade or foreign policy with State, Agriculture, and Treasury officials,

--development of cost/benefit ratios within a reasonable period of time, the time period to be defined by the Secretary of Agriculture,

--consultation and coordination with the AID Administrator to insure that the farmer-to-farmer program was fully integrated into the overall Aid program within each country and that it effectively complemented other technical assistance efforts, and

--formulation of a definitive program of action covering a 5-year period, with an annual update each year, all subject to review and approval by the Secretary of Agriculture.

Background: The farmer-to-farmer idea has been discussed for many years. The idea first appeared in legislation in the Agricultural Trade Development and Assistance Act of 1965.

The International Development and Food Assistance Act of 1975 includes an amendment, Section 204, giving authority to the President to direct the farmer-to-farmer program. The amendment directs AID to integrate the activity into its ongoing program.

A USDA employee was hired by AID under a Participating Agency Service Agreement in March 1977 to initiate, direct, and supervise a farmer-to-farmer program on a 2-year pilot basis. Progress in implementing the program has been unusually slow, atttributable in large part to administrative rather than programatic or ideological concerns.

Advantages: It would involve farmers in international development for the first time, testing the question of how and to what extent they can transfer their expertise. Also, a true farmer-to-farmer program would bring about a greater public awareness and acceptance of international development activities.

Disadvantages: It would be difficult to recruit farmers actively engaged in the pursuit of agriculture, because of the interruption to their livelihood and way of life. They also will be faced with strenuous living conditions overseas and an intense cross-cultural relationship with local farmers. Additionally the development impact is likely to be limited as a result of the level of interaction.

Option 4: Transfer of AID Agriculture Work to USDA

Description: All responsibility for formulation and implementation of U.S. agricultural aid programs around the world would be assigned to USDA. This work would be carried out through a single agency within the Department and could be conducted under the interagency agreement framework presently existing between AID and USDA, or through legislative action.

Background: An International Development Service (IDS) would be formed within USDA, headed by an administrator reporting to an assistant secretary. An assistant administrator would be assigned responsibility for specific areas, including country programs, Title XII operations, research and training programs, and international agricultural centers. Staff offices would be established covering functional areas such as crops, livestock, nutrition, policy analysis, mechanization, and farming

systems. A small staff could operate each functional area at the headquarter's level. The Washington staff would link with an agricultural administrator in selected developing nations. Size of staff in host countries would logically depend on program activity; however, the U.S. presence would be kept to a minimum.

IDS would have the sole responsibility for federally supported programs in international food and agricultural development, including technical assistance, training, research, and present AID food, agricultural, nutritional, and rural development activities. In addition, IDS would have responsibility for the operation and implementation of Title XII programs and projects.

Flexibility would be a keystone of IDS in its associations and operations. It would enlist participation and collaboration of the university community, the private sector, including private foundations, international organizations and others. Full recognition would be given to the role that the universities have and will continue to play in the transfer of technology to developing nations. In connection with the role and thrust of land-grant universities, the Board for International Food and Agricultural Development (BIFAD) established under Title XII of the Foreign Assistance Act could provide invaluable service by furnishing general guidance and evaluating IDS programs.

Advantages: The creation of IDS would generate certain benefits, including:

--a better balance to the dual objectives of assisting the poorest countries as well as supporting over-all food production increases, 1/

--improved technical backstopping of a field staff by scientists in appropriate USDA agencies,

--continued and enhanced university-USDA relationship in international development,

--opportunity to establish new policies free of the constraints presently existing,

--freedom to shift emphasis and staff to field locations where the action takes place, and

--concentration in one entity of all activities and decisions re lating to international agricultural development, including im proved program conceptualization, planning, and implementation.

1/ A recent internal AID study concluded that AID has satisfactorily (if slowly) shifted resources from its capital projects-stress to greater priority on agriculture. However, its commitment to allocating resources to the "poorest-of-the poor" has resulted in insufficient attention to world food needs.

In program development and formulation, IDS could give priority to those countries seriously undertaking programs to increase food production and improve the nutritional well-being of its citizens. In establishing program priorities, substantial weight could be given to those countries which are prepared to undertake integrated, long-term national programs.

The international research centers could be fully utilized by IDS in the transfer of new technology adaptable to developing nations. The centers will have a substantial role to play in speeding the adoption of new technology into development programs.

IDS could be structured and organized to help developing nations to: Analyze government policies needed to encourage acceptance of improved cultural practices and technology; develop educational institutions oriented toward food and agriculture; develop integrated food and agriculture research and extension systems; and establish training progra as required to meet specific needs.

Disadvantages: There is little evidence that USDA can administer a more efficient and effective operation than AID has been able to do. Historically, the Department's priority concern for domestic production and building commercial export markets has resulted in development work being relegated to secondary status in the Department's policy scheme. This option could only be of significant benefit if the Administration commits itself to a high priority for this activity within the context of USDA's other missions.

Option 5: Establishment of Quasi-Governmental Corporation for Recruiting and Hiring

Description: This option entails the establishment of a quasi-governmental corporation solely for the recruitment of individuals for international development activities. The corporation would be governed by a board of directors, composed of members from the private sector and the government. Appointments to the board would be made by secretaries of State and Agriculture. An executive officer would be retained by the board to develop and formulate recruiting plans and programs.

Background: Within the United States, a headquarters would be established with four regional locations. The corporation would build and maintain a current roster of individuals who have certain skills and expertise. Through the regional offices, an information and recruiting program would be continuously operated. The information component would be directed at informing potential employees about various technical assistance programs and the opportunities for employment of qualified individuals.

Project and program design, monitoring of work, and evaluation of results would be the responsibility of the organization making the request for personnel. Likewise, supervision of employees recruited by the corporation would be by the requesting organization.

Advantages: Private sector involvement would be substantially larger than that which would prevail under other arrangements. The build-up and maintenance of a large, unwieldly staff could be prevented, red tape minimized, and the cost of recruiting and hiring reduced. The need for an in-house, permanent personnel staff for recruiting, and hiring would be eliminated.

Disadvantages: Recruitment of competent professionals would be extremely difficult because career development could not take place in a non-tenure environment. To compensate for this, personnel would probably have to be highly paid and would have little loyalty or dedication to the organization. There would be little likelihood of carrying forward of experience gained from one job to the next and little opportunity to tap university or government technical experts for sustained periods of time.

Option 6: Establishment of Quasi-Governmental Nonprofit Aid Corporation

Description: This option entails the establishment of a quasi-governmental, nonprofit corporation to carry out all functions relating to international agricultural development. The nonprofit corporation would be governed by a seven-member board of directors, four of whom would be from the private sector and three from government. The directors would be appointed by the President, subject to usual confirmation procedures. The board would retain an executive director and establish the necessary administrative functions required to carry out international activities. The configuration of the organization would be designed to minimize headquarters staff and to allow for staffing to adequately carry out programs and projects undertaken in host countries.

Background: The legislative authority to establish a quasi-governmental corporation would include certain specific features:

--It would be authorized to receive money from and pay money to the U.S. and foreign governments and from nongovernmental entities.

--It would take on an organizational feature similar to international research institutions so that U.S. government employees could be detailed to it.

Disadvantages: There is a great risk that this option would only serve to create another bureaucracy with numerous layers of constraints placed on it through legislation and administrative directives. However, in the absence of such constraints, the corporation might not be sufficiently sensitive to shifts in foreign policy direction.

Appendix 1

HISTORY OF UNITED STATES FOOD AND AGRICULTURAL TECHNICAL ASSISTANCE ACTIVITIES

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The Conceptual Framework

History

"United States Aid Marks 30th Year" was the headline on the Agency for International Development's publication Front Lines of June 9, 1977. This was in commemoration of the anniversary of Secretary George E. Marshall's now famous speech at Harvard University on June 5, 1947, which launched U.S. bilateral assistance to less privileged nations. His policy declaration triggered action which culminated in establishment of the Economic Cooperation Administration and the popularly called Marshall Plan to help rebuild a war-torn Europe and assist its people after World War II.

There had been other cooperative assistance projects by individual governmental agencies before the Marshall Plan, but ECA was the first government-wide, sustained program of bilateral technical assistance and development. It was the forerunner of a number of government programs which culminated in the formation of USAID in 1961. It is interesting to note, however, that the original Marshall Plan was funded for 15 months with the expectation by many that the $5.6 billion dispersion over that period would end U.S. participation in development assistance.

USAID, now in its 16th year of existence, was preceded by seven development assistance agencies:

(1) Institute for Inter-American Affairs (IIAA), 1948-50
(2) Economic Cooperation Administration (ECA), 1948-50
(3) Technical Cooperation Administration (TCA), 1950-51
(4) Mutual Security Administation (MSA), 1951-53
(5) Foreign Operations Administration (FOA), 1953-55
(6) Development Loan Fund (DLF), 1957-61
(7) International Cooperation Administration (ICA), 1955-61

The rationale expressed by Secretary Marshall has been the foundation undergirding all of our foreign assistance activity, and continues to be so today. USAID, and the predecessor agencies named above, have provided more than $100 billion in goods and other resource services to less fortunate nations in the past 30 years. Subsequent congressional appropriations raised the total to $13.3 billion for the 51-month period April 3, 1948, to June 30, 1952. Marshall thought the United States should take the leadership in sharing its resources and skills with other less privileged nations to help bring about economic health in the world, "without which there can be no political stability and no assured peace."

U.S. bilateral assistance policy and emphasis have seen a number of changes during these 3 decades. A few of the major changes are summarized below.

(1) The Marshall Plan (ECA) and the other early agencies were primarily concerned with reconstruction or redevelopment of war-torn, war-interrupted economies.

(2) In the later 1950's, assistance emphasis shifted toward helping developing nations such as India build an industrial base, infrastructure, and institutions capable of import substitution. Chemical, fertilizer, farm machinery, hydroelectric, and other industrial plants were emphasized.

(3) The mid-1960's saw a shift of concern to world food shortages, population growth, and the need for more rapid expansion of rural development and agriculture in the developing countries.

(4) The 1970's saw two other shifts in policies: (a) recognition that people-oriented programs had been underemphasized in the zeal to build capital bases, and (b) AID appropriations and personnel were reduced as more U.S. assistance appropriations were funneled to the multilateral agencies such as IBRD, UNDP, and the regional development banks such as IDB.

Both arrows and accolades have been launched at U.S. bilateral and other development assistance efforts. However, pertinent warnings are sounded by a recent analyst.1/ Several of her conclusions have particular relevance for future technical assistance efforts in agriculture and rural development:

(1) Too much technical assistance decisionmaking, in both bilateral and multilateral organizations, was directed toward project lending in the past.

(2) Much more concern and decisionmaking must be directed toward employment generation, income distribution, and human capital development in the future.

(3) USAID has recently shifted to a centralized approach in providing technical assistance by reducing field technical specialists. Simultaneously, multilateral agencies are decentralizing. Thus, the program promulgation, recruitment, management, and evaluation problems experienced by AID under the decentralized format now confront the multilateral agencies.

1/ See Judith Tendler, Inside Foreign Aid, (The Johns Hopkins University Press: Baltimore, 1975).

Present Commitments

About 10 percent of the total value of development assistance commitments for agriculture, both bilateral and multilateral, is for technical assistance.

Value of Development Assistance Commitments for Agriculture 1/

	1973	1974	1975
		U.S. $ Million	
Bilateral			
DAC countries 2/	968.8	1,607.1	1,646.2
OPEC countries 3/	36.4	313.5	830.3
Total bilateral	1,005.2	1,920.6	2,476.5
Multilateral	1,618.5	2,542.0	3,299.7
Grand total	2,623.7	4,462.6	5,776.2
Technical assistance portion	318.2	478.5	535.5
		Percent	
Technical assistance as percent of total	14.5	10.7	9.3

1/ "Table 1.1: Value of Development Assistance Commitments for Agriculture," Document A, Analysis of Resource Flows in Agriculture, Consultative Group on Food Production and Investment in Developing Countries, Washington, D.C., May 27, 1977.

2/ Development Assistance Committee (DAC) countries: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Italy, Japan, Netherlands, New Zealand, Norway, Sweden, Switzerland, United Kingdom, and United States.

3/ Organization of Petroleum Exporting Countries (OPEC), Algeria, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela.

Multilateral Assistance 1/

Bilateral and multilateral aid agencies have given increasing attention to the agricultural problems of developing countries. The food crisis of 1973-74 indicated that a greater national and international effort was needed. Three major multilateral aid organizations concerned with food and agriculture development, namely World Bank, IDB, and FAO, with their regular and field programs, increased allocations to food and agriculture from less than $200 million a year during 1961-64, to over $600 million during 1970-72. Commitments were raised to $2.4 billion in 1975, and almost the same level was maintained in 1976. 2/

Mechanisms for Marshaling Technical Assistance 3/

The principal organizations which have been able to marshal U.S. agricultural expertise for technical assistance to the low-income countries during the past 30 years include AID; the Departments of Agriculture and Interior and other federal agencies including the Peace Corps; state and local governments; the universities; private volunteer agencies; foundations; private entities and nonprofit organizations; the international organizations, including the World Bank; regional development banks; U.N. organizations; and the international agricultural research institutions.

The Agency for International Development

Direct hire or career service employees still constitute an important component of AID's cadre of agricultural technicians. But, since the end of the 1960's, the number of career employees in the field of agriculture has been reduced drastically within the agency, particularly in its overseas missions. This reduction has been so severe that AID now finds it extremely difficult to develop and implement programs designed to reach the poorer farmers as mandated by Congress in recent amendments to P.L. 480.

Agriculture has always been an important component of the technical assistance programs of AID and its predecessor agencies. But, it wasn't until FY 75 that agriculture reached a dominant position (over 50 percent) in AID's total development assistance budget.

Contracts with U.S. universities and private firms are a major means of implementing projects. A modification of these are cooperative agree-

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1/ Martin Kriesberg, International Organizations and Agricultural Development. FAER 131, Econ. Res. Serv., U.S. Dept. of Agri., May 1977.

2/ All figures expressed in current dollars for the years mentioned.

3/ L. F. Hesser and C.D. McGraw, Technical Staffing for U.S. Development Assistance Program. AID, June 1977.

ments which are neither contracts nor grants, but allow AID to draw upon U.S. universities to implement certain kinds of activities, particularly in agricultural economics and related social science activities. AID also uses short-term consultants in project design and evaluation for advice and consultation regarding projects and programs. A number of U.S. private consulting firms are approved under indefinite quantity contracts for design and evaluation service.

The Participating Agency Service Agreements (PASAs), which finance 90 percent of USDA's direct involvement in foreign agriculture assistance, are a means whereby AID draws upon specialized technical personnel of other U.S. government agencies, particularly Agriculture and Interior.

AID has drawn heavily upon private voluntary organizations. This form of staffing has been especially useful in activities carried out in rural areas which require fairly large numbers of people in close contact with people in the developing countries.

AID also uses the Intergovernmental Personnel Act of 1970 which provides a mechanism for drawing on technical people in state and local governments and certain categories of U.S. universities. It has been used mostly in agriculture, and only for technical staffing in AID/Washington.

AID officials indicate that their most severe technical staffing problem is in the field of agriculture. The recent amendment to the Foreign Assistance Act, known as Title XII, may mitigate this problem. This amendment authorizes increased involvement of U.S. universities on a long-term basis in AID's development assistance activities. This involvement will likely include: (a) collaborative agricultural research programs, and (b) conception, design and implementation of agricultural development assistance projects, particularly in food and nutrition.

AID allocated about $600 million a year to agriculture during FY 1975-FY 78, (table 1). Since FY 75, there have been substantial increases in the amounts of funds for land reform and local institution; planning and policy analysis; and research, education, and extension. There were corresponding decreases for marketing and storage; input supply; rural industry; and credit.

Program Categories	FY 1975		FY 1976		FY 1977		FY 1978	
	Mil dol.	%	Mil dol.	%	Mil dol.	%	Mil dol.	%
Land Reform and Local Institutions	6.9	1.1	16.3	2.4	22.2	4.3	35.0	6.0
Land reform	(0.4)	(0.1)	(2.6)	(0.4)	(2.6)	(0.5)	(5.8)	(1.0)
Local institutions	(6.5)	(1.0)	(13.7)	(2.0)	(19.6)	(3.8)	(29.2)	(5.0)
Planning and Policy Analysis	9.8	1.6	15.1	2.2	17.1	3.3	32.4	5.5
Research, Education and Extension	53.2	8.7	89.0	13.0	77.1	15.1	131.5	22.3
Centrally funded	(3.5)	(0.6)	(6.0)	(0.9)	(9.5)	(1.9)	(17.5)	(3.0)
International centers	(10.5)	(1.7)	(15.7)	(2.3)	(20.6)	(4.0)	(24.0)	(4.1)
Bilaterally funded	(15.4)	(2.5)	(18.0)	(2.6)	(22.0)	(4.3)	(48.6)	(8.2)
Education and extension	(23.8)	(3.9)	(49.3)	(7.2)	(25.0)	(4.9)	(41.5)	(7.0)
Rural infrastructure	238.8	39.0	205.0	30.0	233.4	45.7	246.0	41.7
Land and water	(137.0)	(22.4)	(146.3)	(21.4)	(134.9)	(26.4)	(115.3)	(19.6)
Development rural electrification	(25.6)	(4.2)	(0.3)	(0.0)	(36.1)	(7.1)	(57.3)	(9.7)
Rural roads	(76.2)	(12.4)	(58.4)	(8.6)	(62.4)	(12.2)	(73.4)	(12.4)
Marketing and storage, input supply, rural industry and credit	303.4	49.6	357.0	52.3	161.9	31.6	144.7	24.5
Marketing and storage	(32.9)	(5.4	(38.4)	(5.6)	(40.3)	(7.9)	(20.2)	(3.4)
Input supply	(200.0)	(32.7)	(234.5)	(34.4)	(86.6)	(16.9)	(71.3)	(12.1)
Rural industry	(23.2)	(3.8)	(12.5)	(1.8)	(25.7)	(5.0)	(15.0)	(2.5)
Credit	(47.3)	(7.7)	(71.6)	(10.5)	(9.3)	(1.8)	(38.2)	(6.5)
Total	612.1	100.0	682.4	100.0	511.7	100.0	589.6	100.0

NOTE: Figures based on Development Assistance appropriation, Food and Nutrition account, excluding nutrition and program development funds; FY 1978 figures include Sahel programs; FY 1976 figures include transitional quarter.

The Department of Agriculture

USDA's formal involvement in foreign agricultural development dates back to 1949, when the Point IV program was initiated. At that time, coordinating responsibility, in collaboration with the Technical Cooperation Administration, was vested in the Office of Foreign Agricultural Relations, predecessor to the Foreign Agricultural Service. In 1952, the Foreign Operations Administration, predecessor to the International Cooperation Administration and AID, established an Office of Food, with primary responsibility for providing technical assistance to developing countries. For the next 10 years, FOA and its successor, ICA, obtained technical expertise from the Department through direct contact with each of the USDA agencies. Arrangements for training of foreign nations in agriculture, however, continued to be centralized in the Division of Extension, Education, and Training in FAS. This Division was redesignated in 1954 as the Foreign Training Division. This group now forms part of the present-day Foreign Development Division of the Economic Research Service.

In 1961, legislation was enacted enabling AID to enter agreements with U.S. Government agencies. This resulted in a formal agreement for USDA/AID cooperation in technical assistance and training. In 1963, coordinating responsibility for the Department was delegated to the International Agricultural Development Service. During the ensuing years, this responsibility was transferred to a number of agencies, including the Foreign Agricultural Service, and the Foreign Economic Development Service. Since 1972, it has been with the Foreign Development Division of the Economic Research Service.

USDA is involved in numerous programs affecting international agricultural development. Most of this work is financed with funds from non-USDA sources, primarily AID. However, some of the programs are financed by USDA-appropriated funds derived from the P.L. 480 program or under agreements with international organizations and foreign governments. Types of programs include:

(1) Training of Foreign Agriculturists: USDA arranges practical and academic programs and conducts courses in the United States and in many developing countries for over 2,000 foreign agriculturists annually. Most participants are sponsored by AID, FAO, or by their own governments. USDA is fully reimbursed for the work.

(2) International Organization Liaison: USDA reviews agricultural projects of the international development banks and participates in establishing U.S. policies and in staffing delegations to the FAO, the World Food Council, the International Fund for Agricultural Development, and the Organization of American states.

(3) Development Programs Associated with P.L. 480 Food Aid: A potentially important development mechanism is use of agricultural commodities made available under P.L. 480. Recent legislative amendments pro-

vide that this program be used to support agricultural and rural development in recipient countries. This could be accomplished more effectively if USDA assisted recipient country teams in drawing up agricultural development plans. In addition to using funds generated from the sale of P.L. 480 commodities in direct support of development efforts, such funds also are used in support of research on development problems of mutual interest to the United States and the recipient nation. Also, the Department is involved in conducting research on tropical problems with funds appropriated specifically for that purpose authorized in Section 406 of P.L. 480.

(4) Cooperative Involvement with Land-Grant Universities: An extension of USDA's long-standing alliance with the land-grant institutions is joint involvement in development assistance. The International Science and Education Council, composed of representatives of the National Association of State Universities and Land Grant Colleges (NASULGC) and USDA was formed to facilitate this mutual involvement. Recent passage of Title XII of the Foreign Assistance Act is an effort by AID and the Congress to further enlist the whole American agricultural community to a greater degree in U.S. development assistance programs.

(5) Other Activities: USDA is involved in animal and plant protection and narcotics control. Others are undertaken because of mutual U.S.-foreign government interests, such as scientific and technical exchanges. These exchanges, carried out under some 30 bilateral agreements with foreign governments, have generated information of major benefit to U.S. agriculture.

ARS derives its authority for the Special Foreign Currency Research Program from the the Agricultural Trade Development and Assistance Act of 1954, as amended (P.L. 480). Under this program, USDA uses "excess" foreign currencies to support agricultural and forestry research on problems of mutual interest to the United States and participating foreign countries.

The program was initiated in 1958. Over 1,700 projects have been negotiated in 32 countries. During FY 1976 USDA, represented by ARS, made 61 grants totalling $7,872,002 (dollar equivalent) for research projects in five countries. These grants complement, but do not duplicate, ongoing domestic activities.

ARS also maintains a small program of tropical and subtropical research, around $680,000 a year since FY 1974. Training of scientists to conduct such research is an integral part of this program. The tropical and subtropical research program will likely increase substantially over the next few years. Authority for this program is in the Agricultural Trade Development and Assistance Act of 1954 as amended in 1966 (Section 406).

USDA is also involved in many other activities that impact on developing countries. Perhaps the most important of these are directed toward foreign market development and the promotion of foreign sales of U.S. farm products. The objective of these activities is sometimes interpreted as being in conflict with the objectives of development activities. However, as the history of many development programs indicates, expanded income in developing countries, resulting at least in part from development assistance, has often resulted in major increases in demand for U.S. farm products.

(6) Technical Assistance: USDA has made available the technical skills of its specialists on short-term and resident assignments in scores of developing countries. Roughly 300 to 400 USDA personnel are involved in overseas technical assistance assignments each year. (table 2). 1/ Reimbursement is made by AID, international aid organizations, and, increasingly, by several countries with ample reserves.

There has been a significant increase in USDA personnel to Latin America. Another definite trend has been the increasing proportion of short-term assignments relative to resident assignments (table 3).

ERS has had the largest share of USDA-AID activity, followed by ARS, ES, FS, SRS and SCS (table 4). These six USDA agencies account for almost 92 percent of all USDA personnel serving overseas on resident or short-term assignments under the PASA arrangement. 1/ Latin America has received the greatest proportion of USDA inputs although much of this has been on a short-term rather than a resident basis. India and Vietnam no longer receive USDA assistance (table 5).

The Department of Interior

The Department of the Interior is involved in two main types of international activities: those initiated internally by a bureau or office seeking a mutually beneficial exchange of technical information with another nation in support of the Departments' objectives; and those initiated externally as a result of either foreign policy priorities or outside entities (foreign governments, AID, and the U.N. or World Bank) which purchase technical expertise.

Total man-years of international activities reported by USDI increased from 440 in FY 1974 to 474 in FY 1975. The leading agencies in these activities in 1975, based on man-years of involvement, were the Fish and Wildlife Service (251), Geological Survey (138), and Bureau of Mines (43). The National Park Service, Bureau of Reclamation, and Bureau of Land Management together contributed 31 man-years, while all other agencies accounted for the remaining 11 man-years.

Many USDI international activities are conducted in what AID classifies as "graduate countries," or more developed countries. Technical assist-

Table 2--USDA technical assistance under PASA and direct reimbursable agreements, by Program Areas, FY 1966 - FY 1976

Fiscal Year	Africa	Asia	Latin America	Middle East	World-wide	Total
			Number of persons			
1966	86	64	113		37	300
1967	54	149	107		64	374
1968	66	200	99		46	411
1969	87	141	70		50	348
1970	58	132	95	15	47	347
1971	71	160	112	30	26	399
1972	72	154	130	37	27	420
1973	56	117	157	14	11	355
1974	68	99	122	22	35	346
1975	89	58	207	17	78	460
1976	73	44	169	21	97	406

Source: USDA technical assistance annual summaries

Table 3--Long-term and short-term technical assistance by USDA personnel, FY 1966 - FY 1976

Fiscal year	Long-term		Short-term		Total
	No.	Percent	No.	Percent	No.
1966	161	54	139	46	300
1967	255	68	119	32	374
1968	273	66	138	34	411
1969	250	72	98	28	348
1970	229	66	118	34	347
1971	207	52	192	48	399
1972	177	42	243	58	420
1973	155	44	200	56	355
1974	141	35	205	65	346
1975	119	26	341	74	460
1976	124	31	282	69	406

Source: USDA technical assistance annual summaries

Table 4--USDA personnel by Agency involved in overseas technical assistance under PASA and direct reimbursable agreements, FY 1970 - FY 1976

Agency	Total personnel	Percent of total
	No.	Percent
ADS	2	.07
AMS	37	1.35
APHIS	21	.77
ARS	387	14.16
ASCS	29	1.06
CSRS	5	.18
ERS (FEDS)	1,121	41.00
ES	345	12.62
FAS	1	.04
FCIC	6	.22
FCS	42	1.54
FHA	69	2.52
FS	109	3.99
OIG	3	.11
OMS	2	.07
REA	1	.04
SCS	261	9.55
SEC	12	.44
SEG	3	1.11
SRS	278	10.16
Total	2,734	100.00

Source: USDA technical assistance annual summaries

Table 5--Proportion of USDA technical assistance personnel assignments in each area, FY 1970-FY 1976

Area	Percentage of: Total Regional Program	Total USDA Effort
	Percent	Percent
Africa:		
Kenya	13.96	2.5
Liberia	9.03	1.6
Nigeria	7.19	1.3
Tanzania	5.54	1.0
Tunisia	17.25	3.1
Zaire	5.13	.9
West Africa	11.50	2.1
East Africa	10.06	1.8
Other	20.34	3.7
	100.00	18.0
Asia:		
Afghanistan	2.88	.8
India	16.78	4.7
Nepal	3.01	.8
Pakistan	9.04	2.5
Philippines	4.46	1.2
Thailand	5.77	1.6
Vietnam	51.90	14.6
Other	6.16	1.7
	100.00	27.9
Latin America:		
Brazil	7.77	2.8
Colombia	8.78	3.2
Dominican Republic	7.27	2.6
El Salvador	14.03	5.1
Nicaragua	3.93	1.4
Panama	7.97	2.9
Paraguay	5.64	2.0
Regional	25.23	9.2
ROCAP	8.48	3.1
Other	10.90	4.1
	100.00	36.4
Middle East:		
Egypt	8.28	.5
Iran	24.20	1.4
Jordan	14.65	.8
Saudi Arabia	11.46	.7
Turkey	40.13	2.3
Other	1.28	.1
	100.00	5.8
Worldwide:		11.9
		100.0

ance provided exclusively to the developing nations by the Department in 1975 was estimated at 96 man-years. Many of the Department's other international technical assistance programs benefit the poorer nations indirectly as well as directly. The Geological Survey, for example, may be mapping the basic geological profile of a region of Africa with major emphasis on locating reserves of oil or minerals. In the process, however, unknown water reserves may be located for agriculture.

The Department of Commerce

In late 1975, the Export-Import Bank hosted a series of discussions among Washington agencies and the U.S. business community focusing on the development of a more effective system to support U.S. business participation in agribusiness projects overseas. Participants sought ways to apply American Technology to overseas food problems and for ways of exploiting commercial opportunities abroad. As a result of these meetings, concerned Washington agencies agreed to strengthen their support programs for agribusiness development and to establish a formalized interagency information and action system. The Department of Commerce was designated as the overall coordination agency of the intergovernmental effort. Its primary function is to coordinate U.S. programs to encourage development of agribusiness projects.

The Department of the Treasury

The Treasury Department participates in all joint commissions on economic development. It is the lead department in matters relating to international financial institutions.

The most significant example of Treasury's contribution to international development is its leadership role in the U.S./Saudi Arabian Joint Commission, the first of its kind between the U.S. and a Middle Eastern country. The Commission was formally established on June 8, 1974, by a Joint Communique issued by U.S. Secretary of State Kissinger and Prince Fahd, now Saudi Arabia's Crown Prince and First Vice President of its Council of Ministers. The Joint Communique stated the mutual desire of the United States and Saudi Arabia to:

> "promote programs of cooperation between the two countries in the fields of industrialization, trade, manpower training, agriculture, and science and technology."

It also stated that the Treasury Department and the Saudi Ministry of Finance would consider general types of cooperation in the area of finance.

With these goals in mind, the Joint Commission was established to provide a formal government-to-government mechanism by which the expertise present in the various parts of the U.S. and Saudi Arabian governments and their respective private sectors could be pooled and brought to bear on the developmental needs of the Saudi economy.

The Joint Commission is chaired by U.S. Secretary of The Treasury W. Michael Blumenthal and Saudi Minister of Finance and National Economy Muhammad Aba al-Khail. It is coordinated on the U.S. side by Assistant Secretary of the Treasury C. Fred Bergsten, and on the Saudi side by Deputy Minister of Finance and National Economy Dr. Mansoor al-Turki.

In order to support and coordinate Joint Commission work on the U.S. side, the Department of Treasury has established an Office of Saudi Arabian Affairs in Washington, and an Office of the U.S. Representation to the Joint Commission in Riyadh (USREP/JECOR). Technical assistance provided by these offices is carried out on a reimbursable basis in accordance with a Technical Cooperation Agreement signed February 13, 1975, between the U.S. and Saudi Arabian governments. Expenses are defrayed by drawing against a multi-million dollar trust fund held by Treasury which was established by the Saudi Arabian government pursuant to this agreement.

During the past 2 years since its establishment, the Joint Commission has acted to achieve the objectives set forth in the Joint Communique by:

(1) dispatching U.S. specialists and technical teams to Saudi Arabia to analyze current conditions in specific areas and to make recommendations for action;

(2) developing proposals for technical assistance projects using these recommendations as a base;

(3) coordinating U.S. Government and U.S. private sector activity in implementing projects approved by the two governments;

(4) developing the institutional framework necessary for carrying out government-to-government technical assistance projects; and

(5) stimulating U.S. private sector involvement in general Saudi development.

More than 25 separate groups of U.S. specialists have been sent to Saudi Arabia during the last 2 years. These teams have conducted short-term studies in a large number of areas and their recommendations have led to the development of several proposals for technical assistance. To date six major technical cooperation projects have been signed. These project agreements provide assistance in the areas of statistics and data processing, electrical equipment procurement, agriculture and water resource planning, national electrification planning, scientific research, and vocational training and construction.

On November 23, 1975, an agreement was signed calling for the Departments of Agriculture and Interior to provide 34 specialists to work with the Saudi Ministry of Agriculture and Water for a long-term period. First year budget was set at $9.8 million.

The Overseas Private Investment Corporation

The Overseas Private Investment Corporation is a U.S. Government agency chartered by Congress to encourage U.S. private investments which support the economic development objectives of participating developing nations.

OPIC, complementing U.S. aid objectives is best known for its insurance of private U.S. investments against political risks and for its loan and loan guarantee programs. However, OPIC also provides a wide range of other services and incentives designed to encourage private investment of capital and skills in the developing nations. These services include investment missions to particularly promising countries, project brokering of U.S. investors of known opportunities abroad, support of pre-investment feasibility studies, help in planning and structuring of projects, intercession with other U.S. and international financing sources, and guidance on investment climate. OPIC's impact on agriculture has been minimal.

The Peace Corps

Some 70,000 Peace Corps volunteers have served overseas since 1961. Those with direct academic backgrounds or skills in agriculture have ranged from an initial 11 percent in 1962, to a low 2 percent in 1967, rebounding to 15 percent in 1976. Peace Corps agricultural development programs have also incorporated volunteers with a generalist's background. Slightly more than 27 percent (1,560) of all volunteers in FY 1976 were engaged in some type of agricultural assistance.

Generalists may not be fully utilized in Peace Corps agriculture programs. A recent Peace Corp evaluation found "an enormous demand for organizers, instructors and managers who can get down to the level of the small-scale farm operators, relate to them, gain their confidence and transfer to them knowledge and skills commensurate with their capacity to receive." 1/ In summary, the evaluation found that, given effective Peace Corp training and supervision, host country support, and the disposition to work in agriculture, together with other talents, the generalist acquire sufficient knowledge and skill proficiency to become an effective agent for agricultural development. Peace Corps emphasis on agriculture will undoubtedly reflect these recommendations.

Universities

The real beginning in technical assistance by universities dates from 1949 with the prompt response of John Hannah, President of NASULGC, in pledging the full cooperation of the Association and the universities in carrying out President Truman's Point IV Program. The first administrator of the program was Henry G. Bennett, President of Oklahoma State University, appointed in 1950.

1/ ABG's in Agriculture. Action-Peace Corps, December 1975.

The following figures give some concept of university involvement in international development. There are about 3,700 foreign students studying agriculture in the U.S. universities, growing slowly from 3,100 in the mid 1960's. They are only 2.4 percent of all foreign students in universities, and this small proportion is less than it was 10 years ago (3.6 percent). Most of these students come from less developed countries.

In 1976-77, there were 68 that had AID technical service contracts in agriculture and rural development. Forty-six of these insitutions were land-grant colleges. In 1966, it was reported that 38 land-grant colleges had international development contracts in agriculture. During the period of October 1, 1976-March 31, 1977, U.S. universities had 206 technical service contracts in agriculture and rural development funded for $105,000,000. 1/ The principal land-grant universities involved in international work in 1976-77 had about 1,300 staff involved in such activities. Among their faculties, they had 6,740 cumulative man-years of overseas technical assistance experience.

The U.S. technical assistance program from its beginning drew staff from universities and also sought at a quite early date to secure technical assistance on a departmental or college-wide basis. The universities were extensively involved in training as well, both by receiving individual participants sent by AID and by various kinds of contracts to develop special courses.

The university role in international agricultural development has evolved slowly and painfully. Many early efforts concentrated on optimistic hopes of quick transfers of specific practices and technologies to foreign environments. There were some institutional development objectives, too, but there was a lack of knowledge of institution building principles and processes, short deadlines, and management through contracts that were unrealistic in scope and procedures. The universities and their governing boards and supporting public had varying and generally inadequate understanding of the role of a U.S. land-grant institution in international development and the training of foreign students.

The early efforts witnessed a few successes and many disappointments. Over the years, there was growing realization that few easy transfers of technology were possible. It was necessary to strengthen or create new institutions, and to learn about the institution-building process. It also came to be understood that university inputs made on an institutional basis were more productive than if they were merely inputs of manpower.

1/ These are not annual rates of funding, but are the total funds made available under the contracts for the Federal-funded life of the contract which varied from 6 months or less to 2 or 3 years.

University-AID relationships have been strengthen by:

(1) Section 211-D of the Foreign Assistance Act that provided in 1967 for grants to U.S. universities to build up their capability to do international work.

(2) The various university and university consortia contracts with AID to support research on the institution-building process, notably the AID/University of Pittsburg contract to develop Institution Building model followed by the Consortium for International Cooperation project on institution building which involved the study of experiences of 35 University projects.

(3) Studies on new institution arrangements, made in 1969 and 1970, which produced "The Institutional Development Agreement: a New Operational Framework for AID and the Universities," published in January, 1970.

The 211-D grants were never large, about $3 to $5 million a year. Fifty institutions have participated in the program. The grants did not revolutionize thinking or the capability of the universities, but are generally conceded to have sharpened the interest and expanded the capacity of most of the institutions helped. The CIC/AID studies on institution building broke new ground in the understanding of the importance and the processes of institution building.

The work on improved forms of cooperation culminating in the proposed Institutional Agreement established good principles for better work with the universities. Some of these principles have been incorporated into the "Collaborative Assistance Method," which is now part of AID's standard procedure used for long-term technical assistance projects. But AID's concept of institution building is given a narrower focus around a specific problem or function. The characteristic pattern of AID-university activity prior to Title XII has been dominated by:

(1) predominately AID project identification and programming;
(2) limited objectives; and
(3) short forward funding for a year or less.

University dissatisfaction with the process has not diminished.

The success of the land-grant colleges in domestic research and extension has owed much to the flexible modes of program cooperation and interaction with USDA, and Federal financial support on a continuing and broadly conceived institutional grant basis. While this teamwork has been successful, it has been given inadequate attention in nearly all international technical assistance efforts. USDA and universities have their own technical assistance projects in research and extension sometimes paralleling each other in the same country. The 211-D program dealt strictly with the universities. The CIC/AID study had little input from USDA, although the land-grant USDA complex was certainly one of the important sources of institution-building theory. The institutional-building agreement study has no mention of USDA linkages and the Title XII legislation contained only incidental mention of USDA. Appropriate link-

ages are only now being built into the procedures and concepts of that program.

International training has consistently kept a pattern of USDA-university teamwork, sometimes with acquiesence of AID and sometimes against AID moves that erode the relationship. The International Science and Education Council has been a positive force in keeping the alignment intact.

The Private Sector

In most developing countries assisted by AID, the private sector accounts for large segments of the agricultural production, marketing, and processing systems. There is also a signicant amount of mixed private-public enterprise performing these functions. These include cooperatives which range from private business oriented entities to those in which there is a heavy government involvement. Consequently, a strategy which emphasizes small farmer production will often depend heavily on the performance of the private and mixed sectors.

U.S. firms have particular expertise in such areas as seed production and marketing, animal feed production, processing of agricultural output, grain storage and marketing, and systems approaches to production and marketing. Small and medium-sized U.S. firms may have an especially important technical assistance contribution to make in these fields, since they are oriented toward working on a scale appropriate to developing country situations. They might be more innovative than larger firms in adapting technologies to a developing country environment.

From October 1, 1976, to March 31, 1977, AID had 297 contracts with private firms and/or individuals for technical support assistance in rural and agricultural development. The terms of many contracts extended beyond the 6-month reporting period. Of the 297 contracts, 287 were active at the time and funded at a level of $22,813,128.

The benefits to developing countries from such contributions by U.S. agribusiness would be impressive. They would include the creation of new consumer markets, the establishment of domestic production and delivery systems, and the resulting creation of substantial employment for off-farm labor.

There are a number of AID-supported activities which directly affect private performance in the agricultural sector, including planning and policy analysis, input supply, marketing and credit, and rural industry and market town development. Specific proposals for further AID-sponsored activities in the agribusiness field include a national assessment of agribusiness systems and bottlenecks joint study teams to discuss specific agribusiness problems; and financing of local agribusiness projects.

Efforts to enlist the participation of the U.S. private sector have met with limited success. Willingness of U.S. private corporations to transfer

technology and know-how depends on expectation of acceptable returns, improvement in market position, or other considerations adequately rewarding their development of technology and know-how.

AID has obtained specific participation of the U.S. private business sector through contracts. One achievement is the Latin American Agribusiness Development Corporation which has been highly regarded for its contribution to development. A number of U.S. agribusiness firms have done research abroad under AID financial contracts, and there have been loans to developing country development banks emphasizing credit for local agribusiness and rural enterprises. Recently, USDA and the Caribbean Development Bank completed a study under AID financing which resulted in a loan for agribusiness development in that area.

AID contracts and grants with international nonprofit institutions for agricultural and rural development heavily emphasize research and development and training functions.

AID had 66 contracts active with nonprofit institutions worldwide during October 1, 1976 - March 31, 1977. Sixty-five of these contracts were funded at $35,423,335, a higher level than the private business sector.

Private and voluntary organizations are a segment of the U.S. private sector which has been heavily involved in both food aid and agricultural development activities. There are over 100,000 such organizations in the United States, of which more than 400 help meet the needs of people overseas. Of these 400, 92 are registered with AID's Advisory Committee on Voluntary Foreign Aid. The main areas in which voluntary agencies are engaged overseas include food aid, disaster relief, refugee relief, and development assistance. AID grants and contracts with private and voluntary organizations in FY 75 amounted to nearly $80 million. Food for Peace donations totaled $177.9 million. Aid financing of overseas freight, excess property provided by AID, and disaster relief funds furnished through the agencies was $81.7 million.

Food Aid: The Agricultural Act of 1949 authorized the Commodity Credit Corporation (CCC) to make available food commodities to private welfare organizations for the assistance of needy people outside the United States Public Law 480 passed in 1954, provides for grants of commodities to other countries and for the distribution of commodities through voluntary agencies. In 1961, P.L. 480 was amended to authorize grants of surplus commodities explicitly to promote development. Amendments in 1966:

(1) removed the requirement that agricultural commodities available for food aid purposes must necessarily be in "surplus" abundance,

(2) reinforced the use of commodities for the support of development projects, and

(3) Authorized the CCC to pay the costs for enrichment, preservation, and fortification of commodities. The latter provision encouraged the development of low-cost, nutritious, high protein blends such as CSM (corn-sorghum-milk) and WSB (wheat-sorghum-blend), and the recent combination of soy-fortified bulgur, cornmeal, and rolled oats.

Another significant P.L. 480 program is Food for Work, designed to support self-help activities at the local or community level. Recipients are paid in part by Food-for-Peace commodities for their work in such projects as land clearing and irrigation projects, the building of small dams, farm-to-market roads, and other rural development related activities.

Voluntary agencies find it difficult to plan projects beyond an annual basis due to yearly fluctuations in available P.L. 480 food supplies. Under Title II of the International Development and Food Assistance Act of 1975, a minimum of 1.3 million tons of food are designated for private and voluntary agencies and the World Food Program. Food for Peace has also been used in voluntary agency refugee programs.

Disaster Relief: Private and voluntary organizations help distribute and coordinate relief supplies, and meet critical help needs for recovery from disasters. Increasingly, voluntary agencies do not make arbitrary distinctions between relief, rehabilitation, and development. Instead, they are beginning to view their immediate response to a disaster and subsequent rehabilitative activities as initial steps in long-range development programs.

Development Assistance includes practical work such as teaching and demonstrating to farmers how to sow and cultivate new varieties, conducting research and training activities, strengthening existing institutions, and creating new ones.

To support the development programs of these agencies, AID recently established two new types of grants (to supplement those known as General Support Grants): (1) Development Program Grants, and (2) Operational Program Grants.

Development Program Grants are designed to encourage and support the efforts of volunteer agencies in improving and expanding their abilities to plan, design, manage, and evaluate development activities. These activities are entirely initiated and implemented by the agencies, but are consistent with AID objectives. The Operational Program Grants are designed to finance new development programs and projects in priority areas.

The Agricultural Cooperative Development International (ACDI), the International Executive Service Crops (IESC), and The Agribusiness Council are examples of major private U.S. organizations providing technical agricultural assistance abroad.

ACDI was created in the early 1960's by leading U.S. agricultural cooperative organizations. The purposes of ACDI are to improve economic and social opportunities for the farmer and family; to stimulate agricultural growth; to develop free, democratic institutions; and to enhance the market and resource position of farmers.

To achieve these ends, ACDI: (1) advises and consults in the organization and operations of agricultural cooperatives and credit programs in developing countries, (2) assists AID in developing and implementing programs of technical assistance, (3) advises government institutions in agricultural matters which enable farmers to strengthen their own business operations, (4) carries out feasibility studies for specific cooperative ventures, (5) arranges formal and on-the-job training in cooperative study and practices for government officials, cooperatives, and rural leaders, and (6) conducts both short- and long-term technical assistance programs fitted to the cooperative and credit needs of the developing countries.

IESC was founded in 1964 to transfer management skills directly from U.S. business to businesses overseas. Under IESC's programs, experienced U.S. business executives contribute their time to short-term assignments--normally between 2 and 4 months--to assist local enterprises which have requested assistance in solving a particular problem. IESC maintains a roster of approximately 6,000 volunteers with a wide variety of business skills and professions. Some 72 different categories of business activities have been assisted by IESC, including agriculture and food processing.

The Agribusiness Council is dedicated to improving agricultural production and marketing in less developed countries. Formed in 1967 by a group of business, academic, foundation, and government leaders, the Council's ultimate objective is to augment the world food supply through increased agribusiness investment in developing nations. Its major activities include evaluation of basic economic potential for private enterprise in less developed countries; analysis of general investment climate in terms of opportunities and limitations; identification of specific agribusiness needs and opportunities for its members; organization and implementation of agribusiness investment missions; and creation of international agribusiness forums.

The International Agribusiness Forum of the Agribusiness Council, is a unique entity in that it is the only means currently available to the agribusiness community to meet with visiting trade and investment missions.

International Agricultural Research Institutions

The Consultative Group on International Agricultural Research (CGIAR) was formed in 1969 to coordinate work of the international research centers. CGIAR is composed of IBRD; UNDP; FAO; the Ford, Kellogg, and Rockefeller

Foundations, the Inter-American Development Bank, and the International Development Research Center of Canada. The Group's Technical Advisory Committee, made up of 13 leading agricultural research personnel drawn equally from developed and developing countries, is responsible for reviewing programs and budgets of institutions that CGIAR supports.

The research centers are:

--International Maize and Wheat Improvement Center (CIMMYT), Mexico.

--The International Rice Research Institute (IRRI), Philippines

--The International Center of Tropical Agriculture (CIAT), Colombia.

--The International Potato Center (CIP), Peru

--The International Institute of Tropical Agriculture (IITA), Nigeria

--The International Crops Research Institute for Semi-Arid Tropics (ICRISAT), located in India

--The International Laboratory for Research on Animal Diseases (ILRAD), Kenya

--The International Centers for Agricultural Research in Dry Areas (ICARDA), Middle East.

--The International Livestock Center for Africa (ILCA)

In 1974, the International Food Policy Research Institute was created. It reports to CGIAR but is not formally linked to it. The International Fertilizer Development Center, (IFDC), is an agency of interest to CGIAR but does not require the Group's financial support.

Financial contributions to the international agricultural research institutions have more than doubled in recent years from about $30 million in 1974 to about $80 million estimated for 1977. AID contributions to the research centers increased from $10.5 million in FY 75, or about 1.7 percent of the total funds appropriated to AID for food and nutrition, to an estimated $24.0 millions in FY 78, or 4.1 percent of the total.

Farmer-to-Farmer Program

The International Development and Food Assistance Act of 1975 includes an amended section relating to farmer-to-farmer activity which has been in the basic international assistance legislation since 1965. The amendment is now Section 214 which gives authority to the President,

rather than the Secretary of Agriculture, to direct the farmer-to-farmer program, with the understanding that AID will integrate the activity into its ongoing program.

Mr. Daniel Parker, then AID's Administrator, approved an action memorandum on February 25, 1976, which gave AID's Technical Assistance Bureau responsibility for administering the program. It was agreed that AID would undertake a 2-year experiment in which special funds ($1.3 million) will be provided to permit selected agricultural universities with overseas contracts to: (1) work with missions in developing position descriptions for such farmers (farmer leaders) as an organic component of the institution's overseas contracts; (2) recruit, orient, and/or train such farmers for the specific assignments; and (3) manage the activities of the farmer-leader components on the same basis as other components of their contracts.

The U.S. farmers selected will be treated as full-fledged members of the university contract team, assigned specific responsibilities, paid a salary equivalent to those responsibilities, and given the same privileges and held essentially to the same requirements as other team members.

AID has contracted with USDA for an agriculturist to manage the farmer-to-farmer program on a RSSA agreement. USDA actively entered into this phase of the program on March 1, 1977. AID mission cooperation has been received and farmer-to-farmer contracts are being drawn to implement the pilot projects as follows:

- The Philippines, Kansas State University contract--integrated agricultural production and marketing.
- Thailand, Mississippi State University contract--seed loan.
- Egypt, Utah State--Arizona--California--Colorado State Consortium--irrigation water management.
- Morocco, Oregon State University contract--dryland farming.
- Pakistan, Colorado State University contract--water management in irrigation farming.

The essential philosophy of the program has been summarized as follows:

> In each agricultural community 10 to 20 percent of the population are identified in some way as leaders. They have been the important testing ground and sounding board for new agricultural technologies, ideas, concepts and change. This group interfaces with professionals in research and extension and the majority of operating farmers. They are the innovators and testers; without their acceptance of new technologies and ideas, other farmers are unlikely to adopt. Further, these leaders provide important feedback information to professionals for redirection. This is

the type of agricultural leader the universities will be encouraged to select for the farmer-to-farmer program in host countries. The U.S. farmer will work closely with the project team to expand technology delivery to local farmers, and will be encouraged to become as much a part of the local community as social and cultural factors will allow.

APPENDIX 2

TECHNICAL ASSISTANCE TO PROMOTE AGRICULTURAL AND RURAL DEVELOPMENT

A Report Submitted to:

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Foreign Development Division
ERS/USDA

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July 21, 1977

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INTRODUCTION

This short paper is based upon our recent experience working with new approaches and new directions in international development assistance -- directions which have, in essence, required a focus on the distribution of benefits to the rural poor.[1] In what follows, these new directions are defined and the concept of "development" is operationalized. Technical assistance options to support the new development approaches are specified and past methods of delivering such technical assistance are assessed. Conclusions and recommendations follow from this brief but, we are hopeful, useful analysis.

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[1] In 1973 Development Alternatives, Inc. (DAI), was commissioned by AID to undertake a study of the impact of development projects on the rural poor. The resulting publication, *Strategies for Small Farmer Development: An Empirical Study of Rural Development Projects* (two volumes) (Boulder, Colorado: Westview Special Studies in Social, Political, and Economic Development, Westview Press, Inc., 1976), was one of the very few cross-project analyses of what works, and what does not work, in the field of rural development. DAI has since been retained by AID to put the recommendations of the report into practice. Over the past two years, DAI has designed 11 rural development projects with funding at more than 100 million dollars. More recently, DAI has also become involved in the implementation of rural development projects.

Donald R. Mickelwait is President of DAI and has 15 years experience in the field of rural development. Peter F. Weisel is a senior staff member, with ten years experience working overseas in development related activities.

NEW DIRECTIONS IN INTERNATIONAL DEVELOPMENT ASSISTANCE TO THE AGRICULTURAL SECTOR

The mandates of the 1970's which have issued from Congress and the World Bank require AID and the Bank to focus their attention on getting the benefits of development to those who find themselves at the bottom of the socioeconomic structure in developing countries. The thrust in agricultural and rural development has shifted from increasing aggregate output to increasing the productivity and income of the majority of rural dwellers -- small farmers, landless laborers, etc., -- and to supporting certain institutions in the agricultural sector.

In attempting to carry out this new assignment, several lessons have emerged.[1] The first is that U.S. agricultural technology is only occasionally appropriate for the Third World.[2] Not only are the conditions, and the relative importance of the factors of production, radically different among small cultivators, but the constraints to change are great -- and often not obvious. In many instances results from a research station or experimental farm have not been accepted or suggested techniques have not been adopted by the local farmer population. To under-

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[1] The following conclusions are documented in *Strategies for Small Farmer Development*, op. cit.

[2] There are instances in which U.S. capital intensive, mechanized, high-cost and high-yielding agricultural methods are exactly what is needed. In northern Sudan, for example, with a preponderance of dry, sparsely populated but potentially valuable land, hand cultivation methods are not appropriate. This is an area, therefore, in which U.S. technology could well be transferred with little modification to a Third World situation. But in our experience there are few such areas in developing countries.

stand the reasons for this lack of response requires a knowledge base which extends beyond the specialties of agriculture. This circumstance has led to the use of a team approach in addressing problems of development in which the technical specialties in agriculture constitute but one component of a rural development project design or implementation undertaking.

A second lesson is that limited cash availability and high risk aversion among small farmers require that inexpensive technological packages be made available for small farmer commercial agriculture. This means that research station results, which often concentrate on maximizing yields per hectare, must be tailored by field trials on small farmers' land in order to establish what, from the farmer's point of view, constitute an optimum package. This approach has led, for instance, to as many as 16 different technological packages for maize to be developed in the CIMMYT program in Mexico, packages which are available at a cash cost which is not significantly greater than that of "modified traditional" technology of local farmers.

A third lesson is that the first and easiest gains in improving small holder agriculture can be made by bringing the least productive farmers to the level of the most productive. Such a situation calls for a careful examination of the existing cultural practices of the small holder, with detailed data collection on the inputs and outputs of his farm. When a detailed knowledge of the best of the existing systems is obtained,

it is possible to recommend technical changes which complement, support and/or combine with the traditional systems in ways which are acceptable to the local population. With the exception of irrigated rice cultivation, few completely new, totally different packages are likely to be adopted by small holders without inordinate time delays or excessive costs.[1]

A fourth lesson is that the one-on-one extension service approach developed in the U.S. at land grant universities is inappropriate, even counterproductive, in the Third World. Single extension generalists tend to work, unfortunately, with the largest and most productive local farmers who do not have the behaviorial, cash and risk constraints of their smaller neighbors. Those countries in which more innovative extension approaches have been used have had significantly and measurably greater success than the few which have copied the U.S. model.

The conclusions are striking. The technology developed in the U.S. is rarely appropriate without lengthy field adaptation and early production and income gains (and confidence) can often most effectively be obtained by extending the best local farming methods. The most successful approachs to spreading the news to small farmers about new and profitable agricultural practices

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[1] Rice, particularly irrigated rice, often requires an organizational unit. The returns are so high, in appropriate ecological zones, that it is possible to pay for qualified technical assistance. Few other technological packages have been found with this characteristic.

is not taught in traditional U.S. agricultural institutions. In short, development in this context is multifaceted, requiring an attack on an interrelated set of constraints: technical, behaviorial, cultural, social and economic. An agricultural economist or an agronomist represents but one component of a solution.

DEVELOPMENT GOALS AND PROCESSES

Development Alternatives defines "development" to mean a process through which is generated self-sustaining change -- change which is viewed as positive both by (a) the local population to be benefited, and by (b) specialists in the development community.[1] At the heart of a dynamic development process is an increased local capacity to understand, learn, and solve problems which impede future growth. The development process carries with it a notion of increasing productivity through a more efficient application of the factors of production as well as one of changing the understanding and behavior of the target population. This latter dimension can often -- though not always -- be enhanced by local organizations which bring together individuals to be assisted and provide a coalescing focus for their own "new directions."

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[1] One or the other of these two groups has frequently opted for processes which are counterproductive to development. It is when both groups agree on a set of objectives that chances for beneficial change are greatest.

The development process will often fulfill basic human needs, but such needs are not the goal of development. Rather, the central goal of development revolves around increasing the capacity of human beings to deal effectively with their own problems.[1] Basic needs can be satisfied with humanitarian assistance, e.g., PL 480 or capital transfers aimed at improving nutrition, housing, sanitation or education. But unless such aid has the effect of increasing the capacity of a local population to provide for itself what was initially funded from the outside, it can not be considered development assistance.

In the past, it has not proven difficult to temporarily raise living levels by channeling external resources into a given locality. It has also been shown that unintended recipients benefit from indiscriminate expenditure of development funds. But it is a highly demanding task to raise the living levels of the rural poor in such a way that initial momentum and progress will continue after the aid funds are expended.

This self-sustaining momentum towards increasingly higher levels of living, fulfillment of basic needs, and improved quality of life -- a momentum which results from locally generated determination and increased capacity and knowledge -- is

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[1] The "basic needs" concept can serve several useful purposes. First, it can identify potential targets of development assistance -- those, for example, who fall below a certain level on the basic needs scale. Second, it can be used to measure progress, tracking changes and improvements in levels of living.

at the heart of the development approach required by the new directions in foreign assistance.

THE DESIGN AND IMPLEMENTATION OF PROJECTS WHICH GENERATE SELF-SUSTAINING DEVELOPMENT

The Approach

The major study of development projects, commissioned by AID and undertaken by DAI as noted above, provided documentation for an approach to development which has rapidly gained acceptance within the development community -- an approach emphasizing broad-based local participation in the development process. The research made two significant contributions to development efforts:

- It identified certain factors and conditions which are most likely to insure project success, including the involvement of the local population in project decisionmaking and commitment of resources; and
- It delineated a process approach to design and implementation which can maximize the chances that conditions necessary for success are met, including distribution goals and self-sustaining momentum.

The process approach includes:

- Determining local level data requirements for project design and the collection of such data;

- Flexibility in the structuring of projects so that changes are assumed as part of the development process;
- A well-considered information system which will report project successes and failures and provide suggestions for remedial action; and
- A two-way communication system which puts project participants in regular and direct contact with project management.

Critical to the process approach is the recognition that the bulk of the data needed in both the design and implementation phases must be generated locally -- from the population to be benefited. Only with an understanding of the reasons for current economic/production practices and the constraints facing the target group in changing their behavior can projects be designed that are realistic and potentially successful.

There is nothing startling in the recommendations of the study; indeed, they constitute a generally accepted, common sense approach to dealing with unique elements in each situation in the Third World, and specifying development assistance which is directly applicable to those circumstances.

Since completing the study of development projects for AID, Development Alternatives has assisted in the design of 11 projects and is providing implementation assistance in some of them. A review of this experience is instructive in delineating how technical assistance can be effectively used in project design and implementation.

Technical Assistance in Project Design

The latest design effort undertaken by DAI involved an area development project in northern Tanzania, a project with a substantial agricultural component. A team was assembled by an AID staff employee who was designated as the design officer. Funding was available for local hire as well as for outside consultants. Several important steps, summarized below, were followed in the design process.

The mission design officer first developed a preliminary list of data requirements for the design work. Utilizing this list, he surveyed secondary data sources to determine which data existed and were readily accessible. On the basis of this examination a determination was made as to the appropriate composition of the design team. The data requirements dictated that an intensive field data collection effort be carried out. Certain data had also to be collected at the regional and national levels.

To accomplish this work the mission drew on several sources. Two social scientists resident in Tanzania and who had considerable research experience in the country were hired to carry out preliminary field studies of each of the districts which were proposed for inclusion in the project -- a process which took two months. Utilizing these studies as a point of departure, DAI provided a development generalist, an economist and an agriculturalist, who, working with the two researchers

responsible for the initial field work, filled in data gaps and prepared the project design. Throughout the design process the mission design officer participated in the field work and played a key role in coordinating the design activity with the mission and Tanzanian government officials involved with the project.

The critical element in this successful design exercises the autonomy of the mission to decide and draw on sources of assistance most useful for carrying out the work -- assistance which included specialists in several different disciplines. This circumstance, coupled with the presence on the mission staff of an officer responsible for project design, resulted in a design process which met the needs dictated by local circumstances and produced a well-designed area development project.

Technical Assistance in Project Implementation

One of the projects in which DAI has been involved in both design and implementation is the North Shaba Rural Development Project (Zaire). As a part of the design process, the specifications of the team composition for the North Shaba Project were written by DAI. Ironically, however, we were unable to meet these specifications from our own staff, particularly with regard to language and area knowledge. The concept of a team as an integrated operating unit, designed to assist the Zairois project unit, required skills and abilities which did not fit easily into standard academic categories. The project requires

flexibility: more research after initiation and less rigid scheduling of a blueprint to be followed. Thus, it is not only the technical specialties which are important, but also the ability to experiment and to seek out solutions from among the many unknowns in a remote and neglected corner of Shaba Province.

This experience reflects a number of the lessons which our previous research suggested -- the need for flexibility in project design so that changes can be made as more is learned about the needs and potentials of the area, the necessity for a system of data collection so that project successes and failures can be reported and suggestions made for remedial action, and the need for a broad based team of specialists which encompass expertise in a number of technical as well as more general behavorial fields.

OPTIONS FOR THE PROVISION OF TECHNICAL ASSISTANCE TO AGRICULTURAL AND RURAL DEVELOPMENT PROJECTS

The Need for Technical Assistance

There are obviously wide ranging circumstances which determine a variety of technical assistance requirements in the developing world. Some, such as those found in many parts of Africa where the human resource base is thin, require technical assistance to bolster the overall capacity of local staff to

design and implement projects. In countries with well developed universities and educational programs, integrated agricultural markets, credit institutions and government support agencies, the requirement for technical assistance may be limited to host country personnel with an occasional generalist, perhaps in evaluation procedures, to complement the development assistance funding.

Foreign technical assistance needs can be met in a number of ways; in the discussion below we have chosen to concentrate upon the following options:

- The private commercial, agro-business sector;
- Government direct hire staff in USDA and/or AID;
- The academic community;
- The development consultant community; and
- International agencies and organizations.

These approaches are reviewed in summary form in the following sections.

Technical Assistance from the Private Commerical, Agro-Business Sector

While the large U.S. equipment manufacturers, seed multipliers, raw material processors, etc., are primarily interested in commercial, large-scale agricultural development, there have been instances when the private sector has deliberately concen-

trated on assisting in the improvement of small holder agriculture. This effort has been concentrated largely in the production of coffee, tea, tobacco and high-value vegetables. In each instance when such involvement has taken place there have been host government incentives for the private sector to undertake such activities as extension, credit provision and technological package generation aimed at small holders. Under normal circumstances, however, greater returns can be realized, and thus the thrust of U.S. agro-business is found, in working with the large holding commercialized agricultural sectors in the Third World.

One option for the provision of technical assistance which would be in the spirit of the new directions is through performance contracting to agro-business organizations in such a way that the beneficiaries would include small holders. In such instances USDA or AID would be fulfilling the role of providing incentives to U.S. agro-business to work in the small farm sector. They, in turn, would generate a local agro-business operation aimed at the small farmer. Obviously, to structure such arrangements would require a good deal of prior investigation and agreement between the parties involved. As a solution to the overall problem of technical assistance to agriculture and rural development, such an approach may not be practicable. However, as a demonstration of the capacity of the U.S. private agricultural sector to assist in international development, it might be valuable.

U.S. Government Direct-Hire Staff

The newly appointed AID Administrator correctly noted that the percentage of agricultural technicians relative to total staff within AID is low, and decreasing. To bolster its depleted ranks, AID has drawn upon the services of USDA, either by direct contract or under PASA agreements, to assist in selected activities in the agricultural sector. Some of the work, such as planning based upon area frame samples has been excellent. For the reasons noted above, a team comprised wholly of agriculturalists is no longer a viable option for designing and implementing the vast majority of agricultural and rural development projects. The need for an integrated approach requires individuals of a number of disciplines outside the agricultural field. However, there are selected cases, notably those where an agency or section of a foreign goverment ministry need specialized attention or a research problem in agriculture needs assistance, where specialists drawn solely from USDA or AID have provided the necessary technical assistance.

In few instances can one find the implementation of area development projects being carried out by AID or USDA staff personnel. This circumstance results from the fact that the requirements of bureaucratic management, control and approval often overwhelm the capacity of direct-hire agricultural technicians to do the necessary technical assistance job. In the majority of cases, whether the work be one of assisting small

farmers, a management study of a ministry of agriculture, or long-range technical assistance for planning in an agriculture or planning ministry, the personnel are drawn from the academic community, the development consulting community or international assistance agencies.

We believe that this circumstance is due to the need for drawing technical assistance from as large a population of available experts as possible. Restricting the assignment of technical assistance to U.S. government staff positions will require either (a) depending upon those individuals on the existing staff who are available for assignment -- matching the needs of functional specialties, experience, and language to the jobs to be undertaken, or (b) recruiting new personnel for overseas assignments. Within the civil service ranks either of these options is a time consuming, lengthy process. Instead, direct-hire employees have acted as project and research managers, helping to select those individuals from outside the government who would be most valuable in completing the specific technical assistance assignments. Without a major change in the manner in which bureaucracies make assignments and select and hire new appointees, this approach could not provide a sufficient match of assignments and qualified personnel to make a technical assistance program work.

The Academic Community

This source of technical assistance takes two different tacts. The first is a filling of specific technical assistance assignments under personal services contracts -- the provision of bodies by body-houses engaged in the private consultant business. The second is an institutional arrangement for technical assistance which is managed by a university affiliate. AID has an expanded development program under Title 12 of the Foreign Assistance Act which attempts to involve universities in long-term overseas projects. Some consortiums of colleges and universities have developed specialties, such as the water resources work being carried out in Pakistan by the Western consortium of seven universities under an AID grant. In addition, individual universities have been offered quick-response contracts to design and manage agricultural projects; but these were more prevelant in the past than they are at present or are projected to be in the future. This is due mainly to the documented failure of purely agricultural solutions to development problems, even though most rural development models are based upon increasing agricultural production.

The major complaint with the instituional arrangements for technical assistance by the academic community is the potential conflict of goals and interests. The university has a requirement to teach, conduct research, fulfill degree requirements (process candidates for advanced degrees) and publish. Some of these activities can be complementary with the design

and management of agricultural and rural development projects. Others may not be complementary, and in fact may detract from the provision of technical assistance.

Attached to the academic community are a number of institutes which are devoted solely to research and to the design and implementation of Third World development projects. Institutes like the Harvard Institute of International Development draw staff from outside the university and, in fact, function much like private consultants within the development community.

The Development Consultant Community

Within the private sector there are great differences in the provision of technical assistance by the development consultant community. Some are well-established body-houses with large resume lists and contacts with the major academic suppliers of technical assistance personnel. Others are tightly knit organizations which rotate staff from home office to overseas assignments. Still others are for-profit organizations that supply technical assistance for projects or for the planning staffs of Agriculture Ministries. Non-profit institutions often do the same. Increasingly, particularly with the changing tax laws on salaries earned overseas, the overseas teams are composed of a mixture of Americans, Europeans and a smattering of Latin Americans and other Third World nationalities.

International Agencies and Organizations

The contracting-out of technical assistance is the preferred method of supporting projects by AID as well as by the other international lending organizations, such as the World Bank or the regional development banks. This is because the grants or loans are provided to a country, and the country is charged, prior to the receipt of additional disbursements, with concluding an "acceptable" contract with a supplier of technical assistance. The UNDP and FAO attempt to furnish technical assistance from within their own staffs, with the resulting problems caused by a bureaucratic inability to deliver the best personnel for the most appropriate jobs in a timely fashion.

CONCLUSIONS

Although private development consultants are the largest provider of technical assistance, the history of failure of all development efforts aimed at the rural poor is such that none can claim unmitigated success. Missionary groups have proven that it is possible, working with small numbers, to make

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[1] There is a second interesting problem, from the point of view of the U.S., in the technical assistance being rendered by international assistance agencies -- it is decidedly not American. A nationality quota system is employed (with the U.S. quota seldom filled by several UN agencies) to restrict the number of Americans, even though the U.S. is the predominate pool for highly-qualified technical assistance. Increasing the funds to international agencies, if it is to be at the expense of bilateral aid, will decrease the number of Americans serving in technical assistance positions overseas.

significant progress over the course of ten years, with minimal outside funds. However, large development efforts which intend to influence large numbers of the rural population run directly into government policies on pricing, foreign exchange, imports and exports, and the inevitable need to maintain the cost of staples within the reach of the urban population. All of this argues that technical assistance at the project level cannot be successful in the absence of an overall planning and economic rationalization of the agricultural sector. And this rationalization is a job for AID, the World Bank and the IMF, in that it requires leverage provided by the disbursement or withholding of large amounts of development or financial assistance. Viewed in this light, a conclusion might be framed as follows:

> When work involves policy decisions which are critical to all development activities in a country, technical assistance should be provided by staff professionals of bilateral or international lending/granting agencies.[1] As the work moves closer to project design and implementation for a specific area development program, there is more reason to seek technical assistance from professional development organizations or institutions.

There are several reasons for the conclusions that project-level technical assistance should be left in the hands of the

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[1] Some countries, of course, do not appreciate policy-level technical assistance funded by the U.S. In this instance, independent institutions, such as the Harvard Institute for International Development which provides specialists who work for host country governments in policy and planning, can provide a useful and more neutral rationalizing influence. The World Bank and occasionally the IMF are also willing to furnish staff technical assistance to planning or finance ministries in selected instances.

private sector, with policy and project director responsibilities undertaken by AID with USDA support:

- The nature of integrated rural development calls for a multi-disciplinary technical assistance team providing leadership and other specialties which are not agricultural in nature. Agricultural development teams in the Third World, at least in the less developed countries, need a wide variety of technical assistance skills which can be successfully provided by agricultural economists, economic anthropologists, and development generalists with experience in the field.

- The nature of the constraints to development support the multifaceted nature of the technical assistance team, with a strong emphasis on experimentation, i.e., searching for solutions which fit the local environment. This is likely to mean long-term adaptive field research which is not technically satisyfing to a highly trained scientist. Para-agriculturalists trained well below the Ph.D. level can provide this assistance if backstopped by a competent agricultural research station.

Organizationally, the technicians at USDA can provide important inputs into the overall agricultural and rural development program of the U.S. Government. AID has few agricultural scientists who are current in their research and able to perform at advanced research stations such as those supported around the world by the Rockefeller Foundation. In drawing upon the services of the USDA through PASA contracts, AID is able to obtain this expertise and remain within the confines of the U.S. Government. However, agricultural technicians and/or the USDA should not be asked to run agricultural development programs

targeted on the rural poor. Too much of the problem is not agricultural, and too little of the solution is amenable to the techniques and knowledge generated as part of an agricultural curriculum or from agricultural experience in the United States.